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AMSAT NEWS SERVICE

ANS-292

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor(a)amsat.org

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http://www.amsat.org/mailman/listinfo/ans

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SB SAT @ AMSAT $ANS-292.01

ANS-271 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 292.01

>From AMSAT HQ KENSINGTON, MD.

DATE 2020 September 27

To All RADIO AMATEURS

BID: $ANS-290.01

ARRL Comments in Orbital Debris Mitigation Proceeding

10/13/2020

In comments to the FCC, ARRL targeted two specific areas of concern regarding a Further Notice of Proposed Rulemaking (FNPRM) in IB Docket 18-313 - mitigation of orbital debris in the new space age. In an earlier phase of the proceeding, ARRL filed comments and met with FCC staff to discuss the proposed rules. In comments filed on October 9, ARRL focused on the areas of indemnification and maneuverability/propulsion. Indemnification places the liability for any possible damage from a satellite on an individual or entity. ARRL reiterated its assertion that, as a practical matter, an indemnification requirement "would seriously impair the ability of amateur and university experimenters to launch and operate satellites under US auspices" due to the potential liability and high insurance cost.

Additional information is available at the ARRL Web Site:

https://bit.ly/3iZiGwj

[ANS thanks ARRL News for the above information]

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[ANS thanks Ray Hoad, WA5QGD, AMSAT Orbital Elements Manager, for the above information]

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https://www.qsl.net/kd2bd/predict-2.2.7.tar.gz

And the Android/Termux release is available here:

https://www.qsl.net/kd2bd/predict-2.2.7-termux.tar.gz

Both versions are source code releases. An included "configure" script will configure and compile PREDICT and its associated utilities for your specific platform while you wait.

Termux is an Android terminal emulator and Linux environment application that is available at no cost through Google Play. Further details are available at:

https://termux.com/

Further details on PREDICT are available at:

https://www.qsl.net/kd2bd/predict.html

Stay safe, stay well, and Happy Tracking!

73 de John, KD2BD

[ANS thanks John Magliacane, KD2BD for the above information]

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ARISS NEWS (awaiting update from AJ9N)

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

Upcoming ARISS Contact Schedule as of 2020-10-14 18:00 UTC

Quick list of scheduled contacts and events:
Ramona Lutheran School, Ramona, CA, direct via N6ROR
The ISS callsign is presently scheduled to be NA1SS
The downlink frequency is presently scheduled to be 145.800 MHz
The scheduled astronaut is Chris Cassidy KF5KDR

Contact was successful: Wed 2020-10-14 16:26:13 UTC

ARISS is very aware of the impact that COVID-19 is having on schools and the public in general. As such, we may have last minute cancellations or postponements of school contacts. As always, I will try to provide everyone with near-real-time updates.

The following schools have now been postponed or cancelled due to COVID-19:
Postponed: No new schools
Cancelled: No new schools

The ARISS webpage is at https://www.ariss.org/
Watch for future COVID-19 related announcements here also.

Note that there are links to other ARISS websites from this site.

The main page for Applying to Host a Scheduled Contact may be found at
https://www.ariss.org/apply-to-host-an-ariss-contact.html

ARISS Contact Applications (United States)
Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

All dates and times listed follow International Standard ISO 8601 date and time format YYYY-MM-DD HH:MM:SS

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

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around 1430km.

DN13/23 and DN22: @KI7UNJ, 10/16 - 10/19: No pass list, just follow Twitter, BEACON APRS KI7UNJ-9 KI7UNJ-IOS

16th DN13/23 Line

17th DN22

18th DN22

19th DN13/23 Line

KQ2RP is heading to FN44/54 again. Will be on FM birds from FN54 with occasional FN44/54 line. FN53 possible. Oct 11-16th. Logging as KQ2RP/1.

EL Grids, @N1PEB 10/10 -10-14: 10/10 EL95 Key Largo, 10/11 EL94 Key West, 10/12 EL84 Dry Tortuga, 10/13 EL94 Key West, 10/14 TBD

>From TI2BSH: October 16, 2020 I will be working in EK71 and will go out on the satellites:

AO-91 at 04: 22z,05:57z, 16:38z

SO-50 at 04: 48z, 15:16z

If you hear me and want that grid call in international phonetic code. 73s

Major Roves:

Doug N6UA and Ron AD0DX are planning to activate DL88 on Sunday Oct 25th. This will be a daytime activation only because the Talley Campground is currently closed. We will be on FM and Linear satellites. Thanks to everyone that donated back in April before the COVID restrictions. K5Z on qrz.com has more details including passes:https://www.qrz.com/db/K5Z Currently the weather looks good and we will be monitoring the weather throughout the week. If there is a chance of rain in the forecast we will have to find another date.

We are looking forward to giving out this rare grid!

73

Ron AD0DX and Doug N6UA

Please submit any additions or corrections to Ke0pbr (at) gmail.com

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

Clint Bradford, K6LCS will give his "Work the FM Voice Satellites With Minimal Equipment" Zoom presentation on the following dates for:

10/27/2020 - Cherryland ARC / Traverse Bay ARC

Additional presentations are in the planning stage:

TBD - Antelope Valley (CA) ARC and a private presentation for a Boy Scout troop in Danville, Pennsylvania

Club Groups are asked to update their copies of the Zoom application prior to the scheduled session by directly downloading it from https://zoom.us/

[ANS thanks Clint Bradford, K6CLS for the above information]

Satellite Shorts From All Over

+ NASA will provide live coverage of the return to Earth for agency astronaut Chris Cassidy, KF5KDR, and two Russian cosmonauts Wednesday, Oct. 21, after six months aboard the International Space Station. Cassidy, the Expedition 63 commander, and cosmonauts Anatoly

Ivanishin and Ivan Vagner of Roscosmos, will close the hatch to their Soyuz MS-16 spacecraft at 20:10 UTC Wednesday. Their Soyuz will undock at 23:32z. A parachute-assisted landing is set for 02:55z on Oct. 22 on the steppe of Kazakhstan. Complete coverage of the return will be available on NASA TV and the agency's website, https://www.nasa.gov/nasalive
(ANS thanks NASA for the above information)

+ Joe Werth, KE9AJ Tweets about a new distance record set for AO-7 Mode A: "Amazing QSO with Olivier, @F5RRO on AO-7 MODE A. Breaking a 40 year old AMSAT distance record at 6,879 km. Olivier used a MA5B Yagi and I used my Moxon..... Thanks Olivier!" The path map may be seen at: https://bit.ly/2SUSeJM
(ANS thanks Joe Werth, KE9AJ for passing along the above information)

+ GNU Radio Project (@gnuradio) tweeted at 3:52 PM on Tue, Oct 13, 2020: Wylie Standage-Beier's @thewyliestcoyot workshop on Writing GNU Radio Blocks is up on YouTube! A hands on intro to blocks, flowgraphs, and systems from simple Python simulation of a phase shift keyed signal in white noise to a functioning communications system. Link to Twitter Feed and Youtube link: https://t.co/XldgMCJeLy
(ANS thanks JoAnn Maenpaa, K9JKM for relaying the above information from Twitter)

+ OSIRIS-REx, which launched in 2016 and has been orbiting the asteroid Bennu in microgravity since 2018, is going to try its first Touch And Go (TAG) maneuver next week. This maneuver involves autonomously descending toward the asteroid with the craft's sample arm extended, briefly making contact, using nitrogen gas to blow loose material into a sample collection head, and returning to orbit. The pristine sample should arrive back on Earth in September 2023. Visualization at https://www.youtube.com/watch?v=NjlGYHJ2560&feature=youtu.be

(ANS thanks The Orbital Index for the above information)

+ Blue Origin's reusable suborbital New Shepard flew on October 13 for the first time since December 2019, completing its 13th flight, and seventh reuse for this booster. The mission successfully carried several NASA experiments, including a "microgravity LilyPond"--a hydroponic chamber for growing edible aquatic plants in space--and a system for precise planetary landing that uses both terrain relative navigation (for high altitude use, soon to be used for landing by Mars 2020) and LiDAR (for final propulsive landing), with a planned application to upcoming lunar landing missions.
(ANS thanks The Orbital Index for the above information)

+ Tweeted on October 13: Premier signers of Virgin Orbit's payload wall, @AMSAT RadFxSat-2/Fox-1E is out of our hands and in the hands of @Virgin_Orbit to fly as part of Launcher One's first payload. Great fun sharing in their new experience and first integration. And tours of their facilities to boot!
https://twitter.com/n0jy/status/1315878009371422720?s=27
(ANS thanks Jerry Buxton, N0JY, AMSAT VP Engineering, for the above information)

+ Soyuz crew docks with International Space Station: In a mission marking the end of an era, NASA astronaut and former virus hunter Kate Rubins, using NASA's last currently contracted seat on a Russian Soyuz spacecraft, rocketed into orbit Wednesday with two cosmonaut crewmates on a record-setting flight to the International Space Station.

Celebrating her 42nd birthday, Rubins' launch came just two weeks before 20th anniversary of the arrival of the station's first crew on Nov. 2, 2000. Since then, the lab complex has been continuously staffed by rotating crews, or expeditions, of American, Russian, Japanese,

European and Canadian fliers along with a handful of space tourists.
Additional information is avalable at: https://bit.ly/31brNUw

(ANS thanks Spaceflight Now and CBS News for the above information)

+ Oxygen supply fails on Russian segment of ISS, crew not in danger
(Oct 15, 2020) The oxygen supply system has failed in a module on the Russian segment of the International Space Station (ISS) but the crew is in no danger, Russian space agency Roscosmos said Thursday.
The oxygen supply system on the Zvezda module on the orbital lab failed late on Wednesday but a second system on the American segment is operating normally, a Roscosmos spokesperson told AFP.
"Nothing threatens the security of the crew and the ISS," said the spokesperson, adding this repair work to fix the issue would be carried out on Thursday.
The issue arose after three new crew -- two Russian cosmonauts and an American astronaut -- reached the ISS on Wednesday to bring the number of current crew on board to six. Additional information at:https://bit.ly/31aO596

(ANS thanks Spacetravel and AFP for the above information)

Tips for the New Satellite Operator [Tentative Add-on FOR CONSIDERATION]

This is the first of a what I hope to be a monthly New Satellite Operators Corner. I will offer AMSAT New Operator tips and links to AMSAT resources for new operators and posts from various interest groups where useful info is published. This weeks tip comes from Rick, WA6NDR via TH-D74A(a)groups.io. I hope you find this as useful as I have.
Jack, KD4IZ, Editor, AMSAT News Service.

Tip of the month: TH-D74A ISS APRS settings

From: Rick - WA6NDR

"I was able to make an ISS APRS contact today with just the TH-D74A and an Arrow antenna (details at the end). I started with a video from Don W6GPS and documented what I ended up doing including minor changes. Change the call sign and email address to yours. "Personal preference" settings are optional. The reasoning behind most of the settings is given in Don's video. I am using TH-D74A firmware v1.10 (with v1.11 released 8/26/2020 but not seeming worth the installation time)."

. Menu 800 = SD Card, Export, Config Data (FOR LATER IMPORT AND NORMAL OPERATION).

. Menu 999 = Config, System, Full Reset

. [F]DUAL to set A band only.

. Menu 900 = Config, Display, Backlight Control = On

. Menu 404 = GPS, Basic Settings, Battery Saver = Off

. Menu 500 = APRS, Basic Settings, My Callsign = WA6NDR-7

. Menu 503 = APRS, Basic Settings, Status Text = 1/1, "VIA ISS WA6NDR(a)ARRL.NET"

. Menu 504 = APRS, Basic Settings, Packet Path = Others1, "ARISS"

. Menu 507 = APRS, Basic Settings, DCD Sense = Detect Data

. Menu 511 = APRS, Beacon TX Control, Initial Interval = 30 min.

. Menu 512 = APRS, Beacon TX Control, Decay Algorithm = Off

. Menu 513 = APRS, Beacon TX Control, Prop. Pathing = Off

. Menu 514 = APRS, Beacon TX Control, Speed = Off

. Menu 903 = Config, Display, Power-on Message = "WA6NDR ISS"

. Menu 904 = Config, Display, Single Band Display = GPS(GS)

. Menu 920 = Config, Battery, Battery Saver = Off

. Menu 921 = Config, Battery, Auto Power Off = Off

. Menu 950 = Config, Date & Time, Setting = <local>, UTC -7:00

. VFO, set frequency to 145.825 MHz

. [F]APRS (see "APRS 12" on the top display, GPS info on bottom).

. Personal preference, for SD Card recording and save to PC.

o Menu 941 = Config, Auxiliary, PF2 = Recording (on/off)

o Menu 944 = Config, Auxiliary, PF3 (Mic) = Screen Capture

o Menu 980 = Config, Interface, USB Function = Mass Storage

. Menu 800 = SD Card, Export, Config Data (FOR ISS OPERATION).

. Operation

o Arrow 146/437-10WBP antenna: Use only the 2m 3-element part.

o Open squelch: [F]MONI, KNOB CCW, ENT. Listen, watch...

o BCON to send a beacon. BCON again (off). Repeat.

(ANS thanks Rick Nungester, WA6NDR for this information)

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73 and Remember to help keep amateur radio in space,
This week's ANS Editor, Jack Spitznagel, KD4IZ

kd4iz at amsat dot org